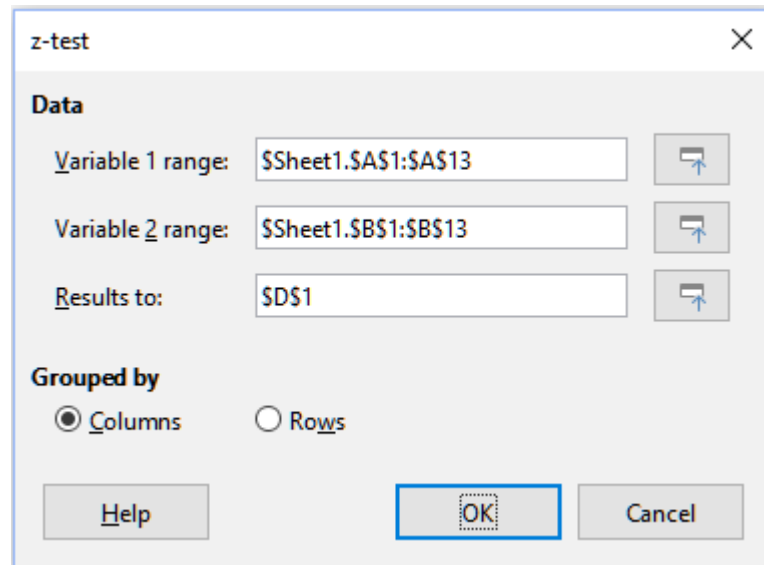Use the **Shrink / Expand** buttons next to the *Variable 1 range*, *Variable 2 range*, and *Results to* fields if you need to shrink the dialog while selecting cells with the mouse.

Figure 355: z-test dialog

To provide an example of using this tool, we again make use of the input data set shown in Figure 351. In this case the data in columns A and B represent two data sets, referred to as *Variable 1* and *Variable 2*. Figure 356 shows the Z-test results calculated for this input data using the settings shown in Figure 355.

D	E	F
z-test		
Alpha	0.05	
Hypothesized Mean Difference	0	
	Variable 1	**Variable 2**
Known Variance	125.076923	94.435897
Mean	17.583333	20.461538
Observations	12	13
Observed Mean Difference	-2.878205	
z	-0.684369	
P (Z<=z) one-tail	0.246871	
z Critical one-tail	1.644854	
P (Z<=z) two-tail	0.493742	
z Critical two-tail	1.959964	

Figure 356: Results from Z-test tool

For the Z-test tool to work properly, a known variance for each sample must be inserted in the related cell. In the example shown in Figure 356, the variances (125.076923 and 94.435897) were inserted using the formula =VAR(A1:A13) into cell E5 and the formula =VAR(B1:B13) into cell F5. The subsequent z and P values will be updated automatically.

It is also possible to insert different values for Alpha (cell E2 in the example) and Hypothesized Mean Difference (cell E3 in the example) inputs. As with the known variances changes described above, after changing the Alpha and the Hypothesized Mean Difference, the subsequent z and P values will be updated automatically.